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FAA Part 107 Airman Knowledge Test Prep

FAA Part 107
Airman Knowledge
Test Prep

Introduction to National Airspace

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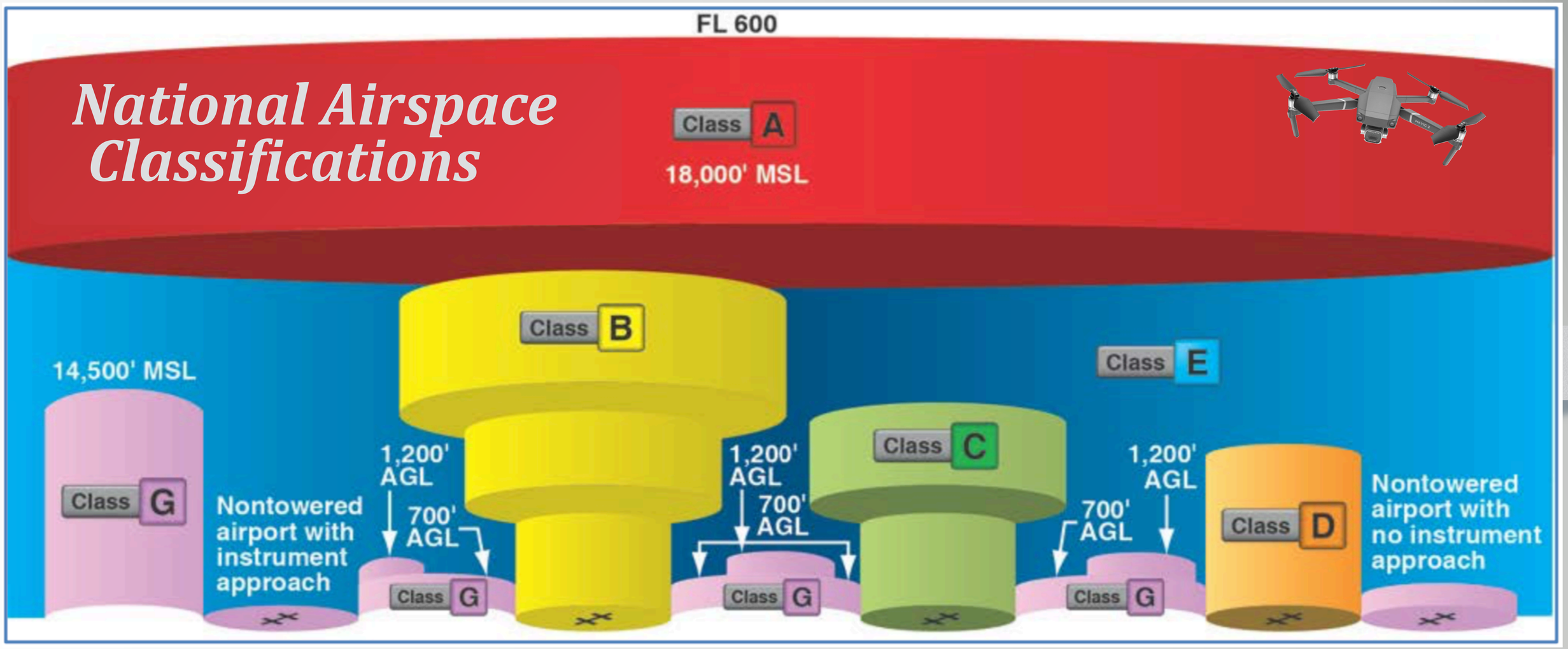
The configuration of each Class B and C airspace area is individually tailored to particular Airports and consists of an inner surface area and up to two or more outer layers that are set up like an upside-down wedding cake.



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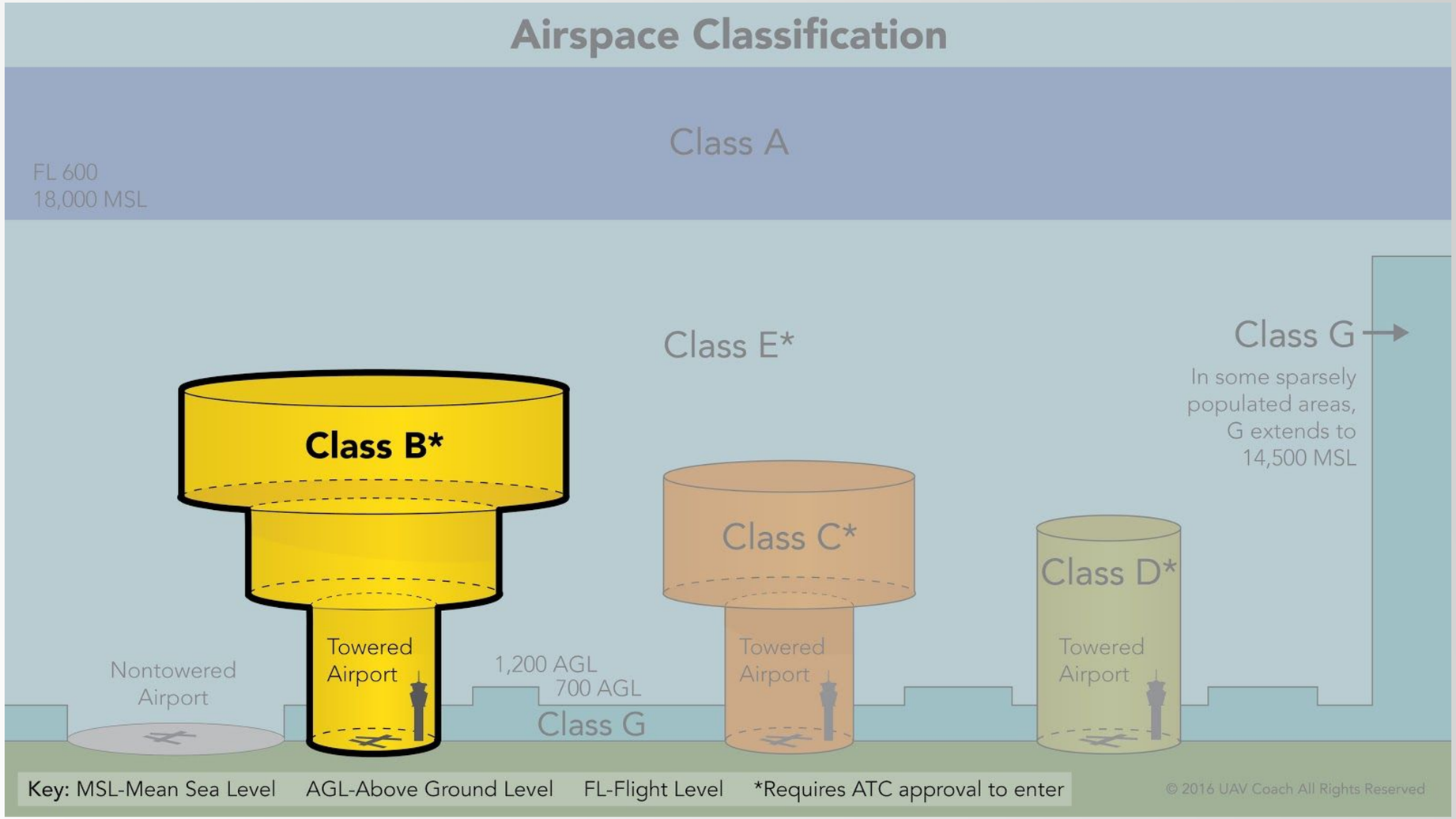
Class B airspace is generally airspace starting at the surface up to about 10,000 feet mean-sea-level (MSL) surrounding the nation's busiest airports.



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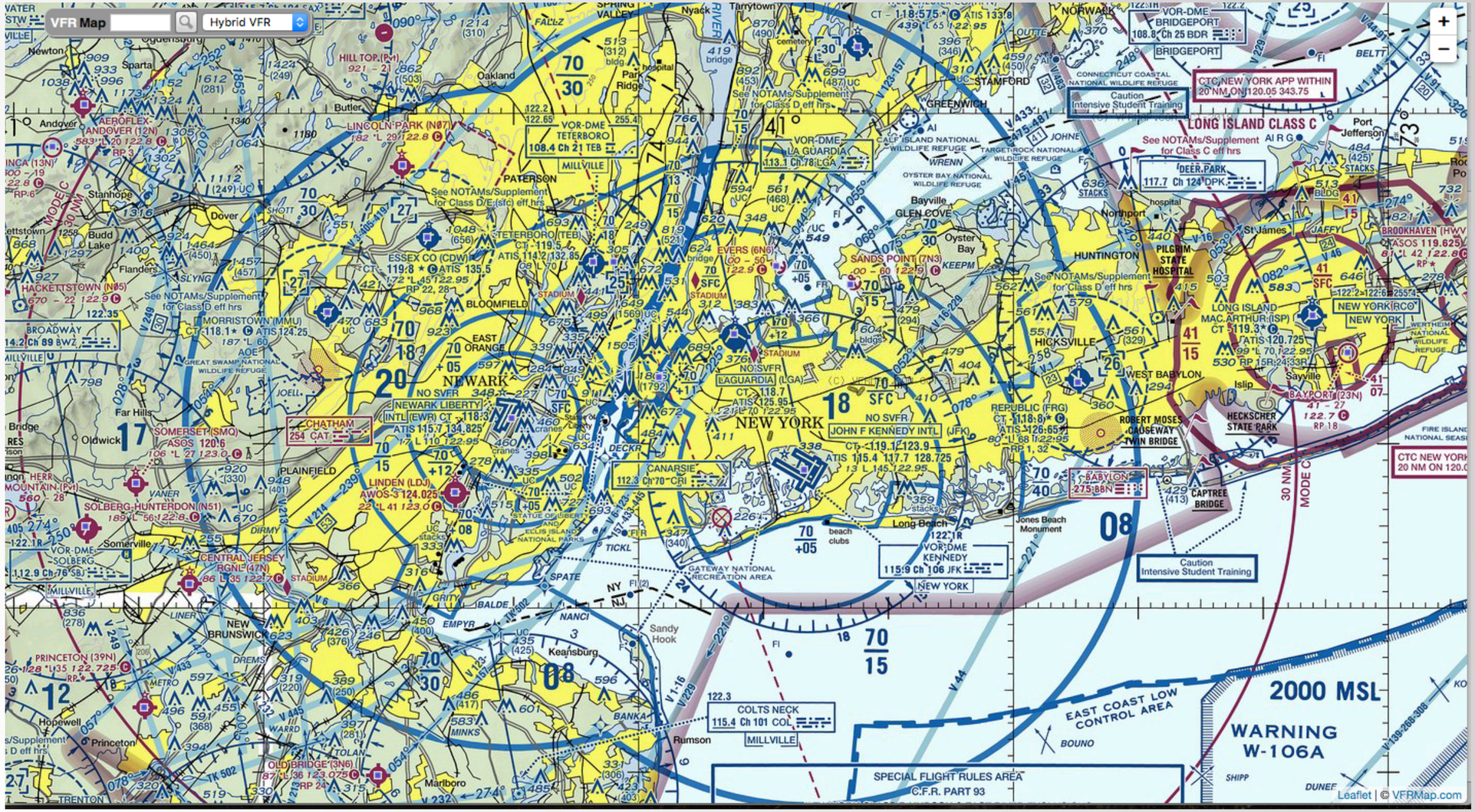
Class B airspace surrounding JFK and Newark. Look for "fractions" indicating Class B floor and ceiling.


VFR Map
Hybrid VFR
NEWARK
NEW YORK
JOHN F KENNEDY INTL (JFK)
LA GUARDIA (LGA)
NEWARK LIBERTY INTL (EWR)
LONG ISLAND CLASS C
CTC NEW YORK APP WITHIN 20 NM ON 120.05 343.75
Caution Intensive Student Training
See NOTAMs/Supplement for Class C eff hrs
See NOTAMs/Supplement for Class D eff hrs
See NOTAMs/Supplement for Class D/E (sfc) eff hrs
2000 MSL
WARNING W-106A
EAST COAST LOW CONTROL AREA
SPECIAL FLIGHT RULES AREA C.F.R. PART 93
Leaflet | © VFRMap.com

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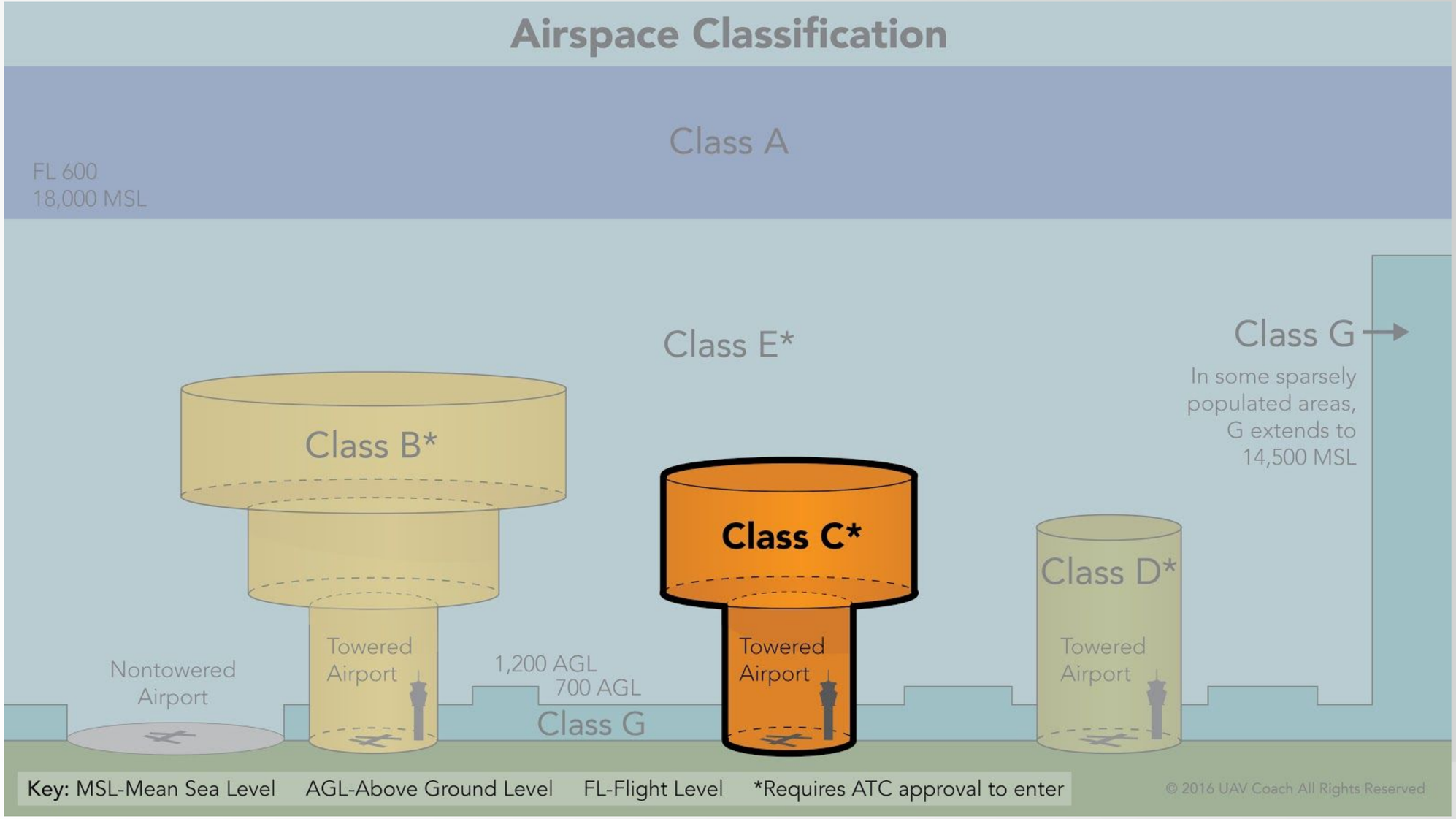
Class C airspace is generally airspace from the surface up to 4,000 feet above the airport, surrounding airports that have an operational control tower, are serviced by a radar approach control, and have a certain number of instrument flight rules (IFR) operations or passenger enplanements….. Think of Class C airspace as that over "Cities", not BIG Cities like New York, but smaller ones like Windsor Locks, CT.



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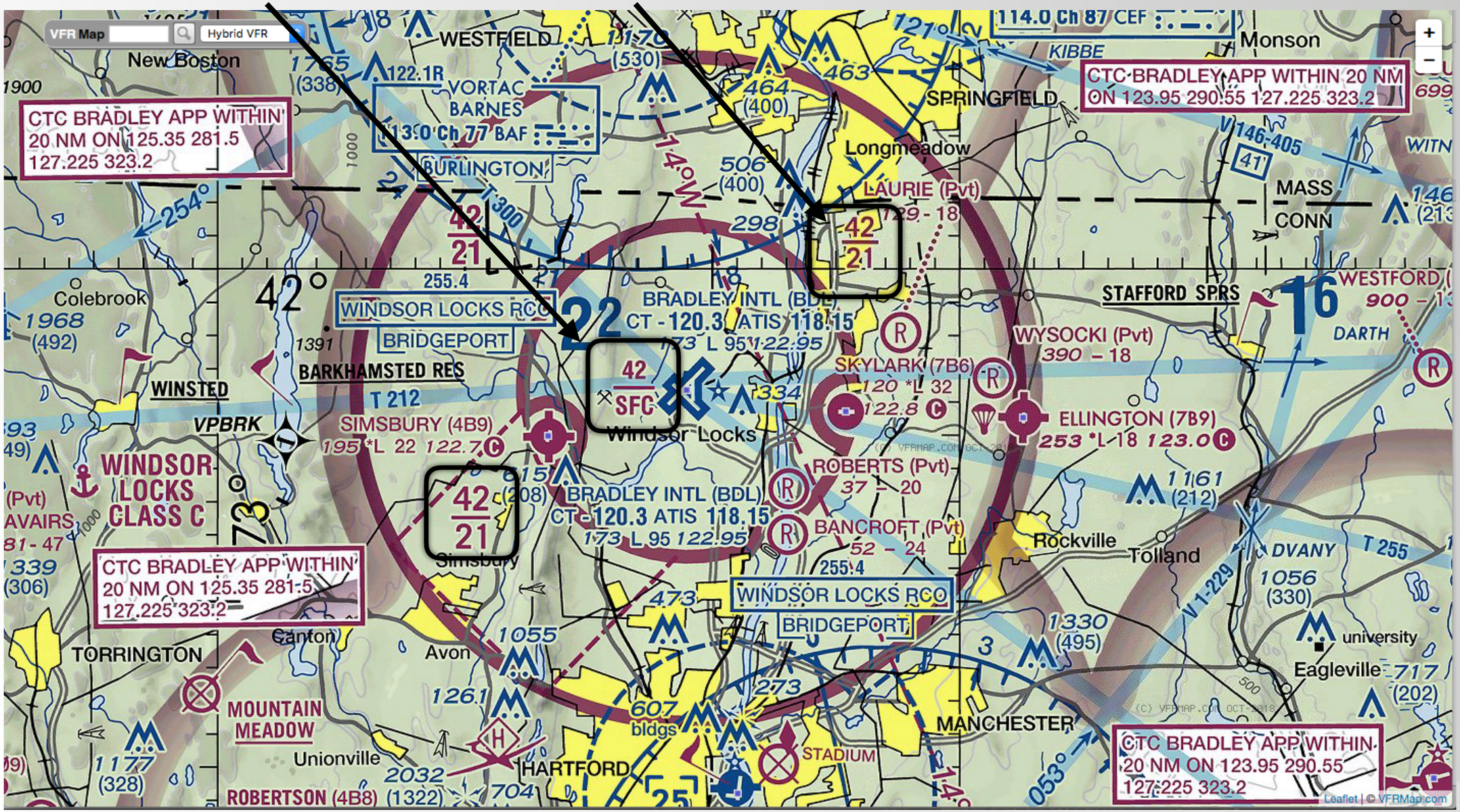
Class C airspace surrounding Bradley Airport, Windsor Locks, CT.
Look for "fractions" indicating Class "C" floor and ceiling… for BDL inner circle it is Surface to 4,200ft (42/SFC). Outer circle is 2,100ft to 4,200ft, below that is class "E" airspace.



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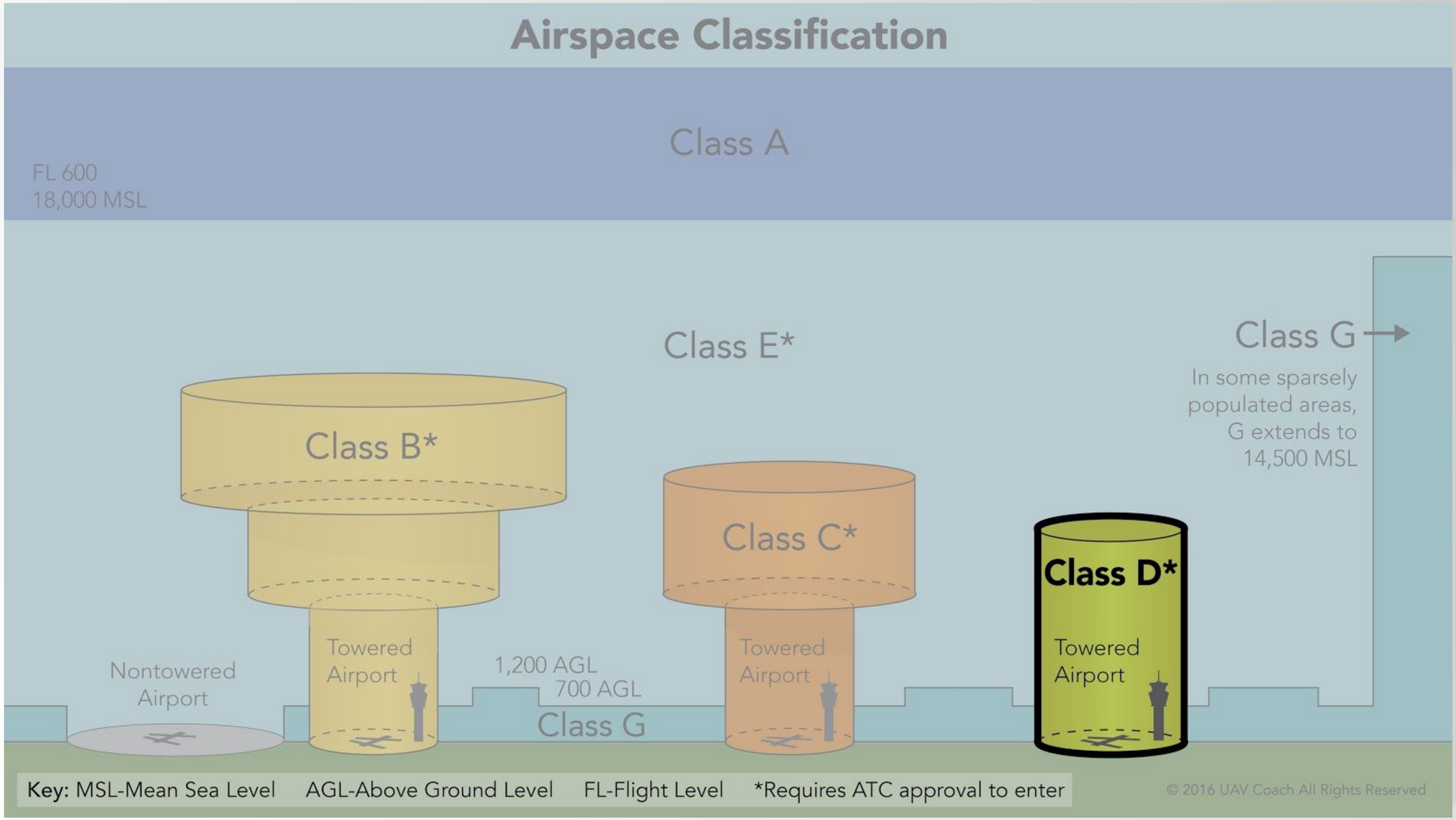
Class D airspace is generally set up as a single cylinder airspace starting at the surface up to about 2,500 or more feet mean-sea-level (MSL) surrounding small (diminutive) city airports - TWEED. Above Class D may be other controlled airspaces.



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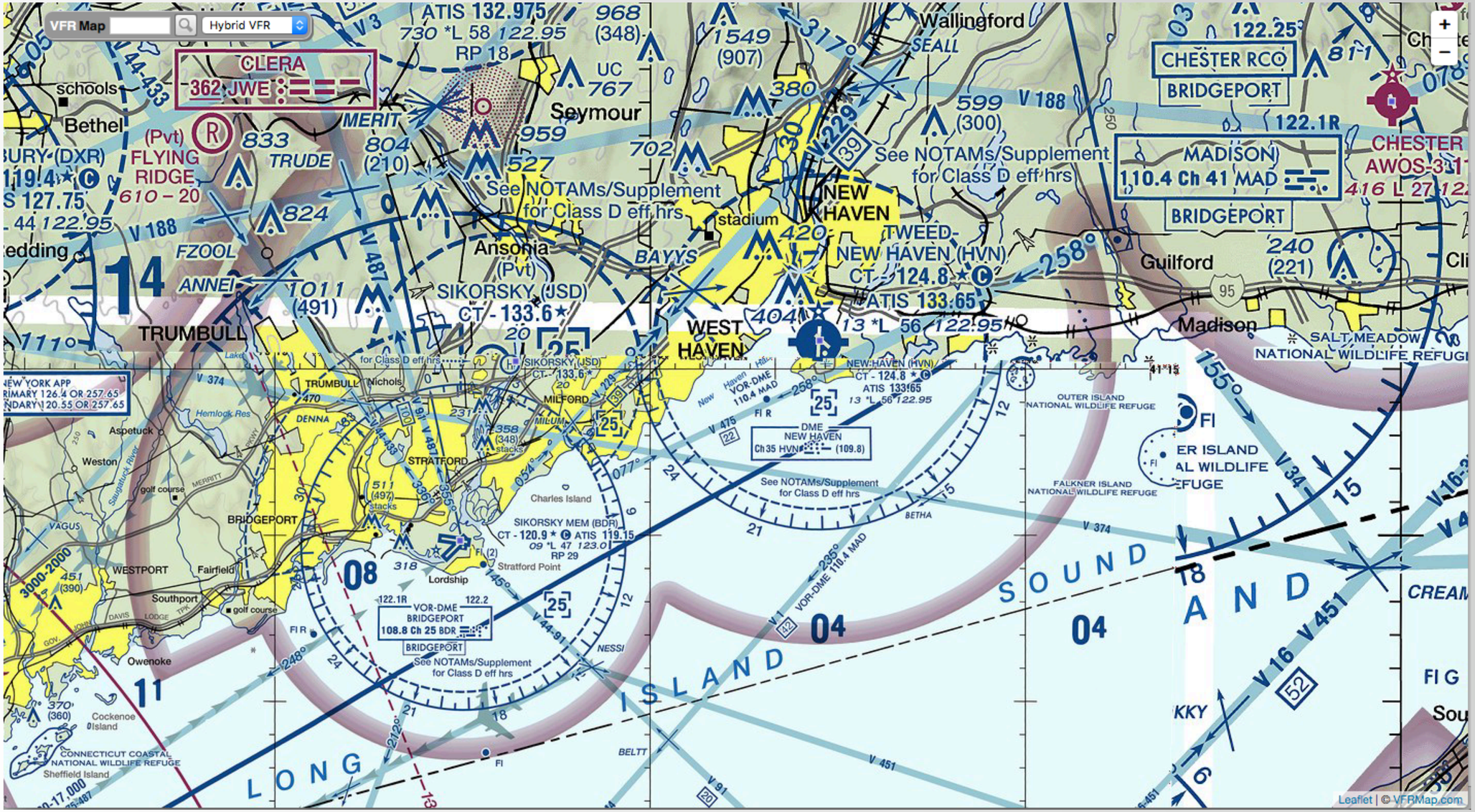
Class D airspace surrounding Tweed, New Haven and Sikorsky Bridgeport, CT. Look for "bracketed numbers" indicating Class D ceiling. Class D airspace most often starts at the ground surface SFC…



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Class E airspace is generally "Everywhere" starting at either the surface, or at 700ft or 1,200ft AGL (this last designation is not shown on Sectional Charts).

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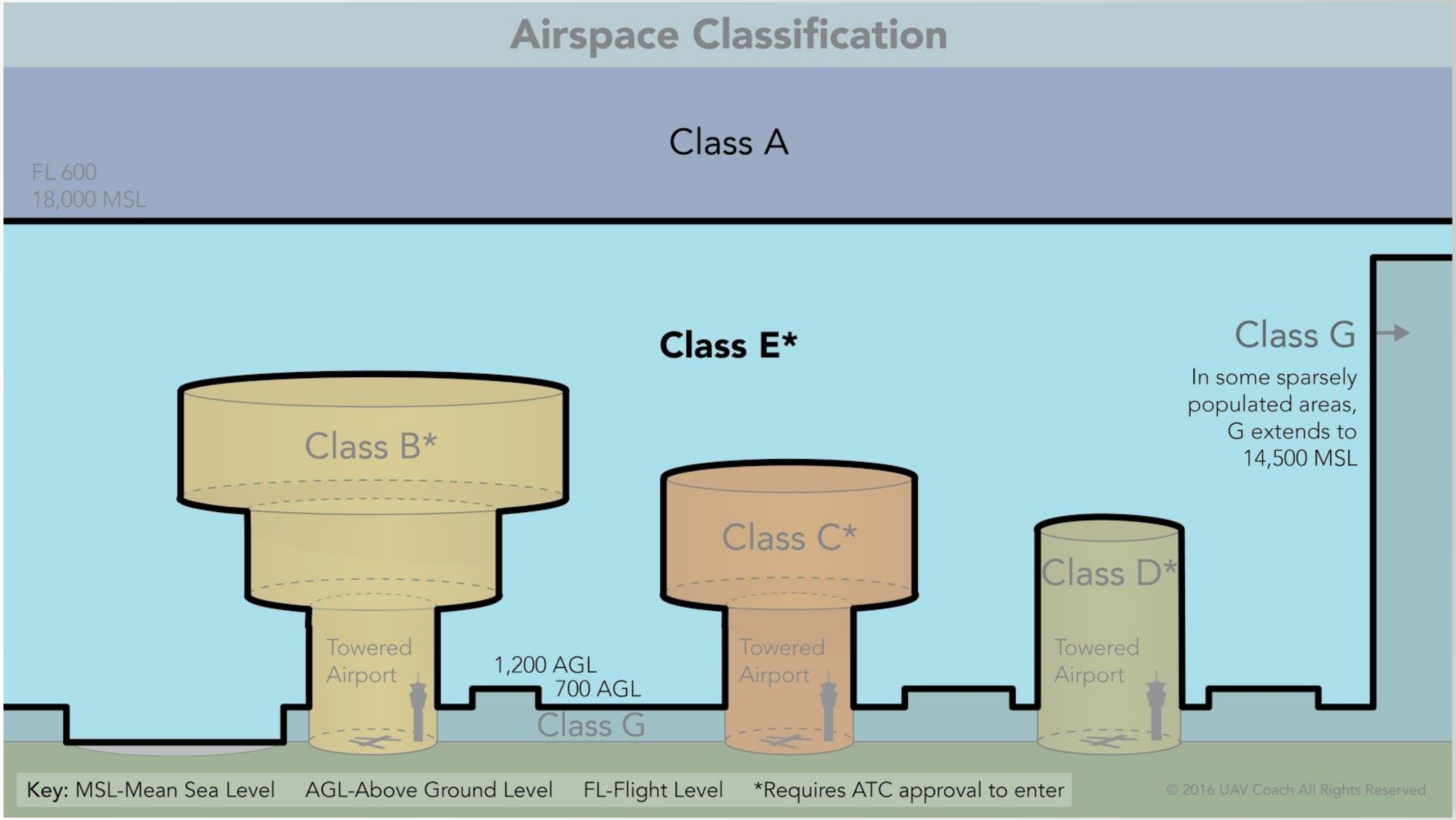

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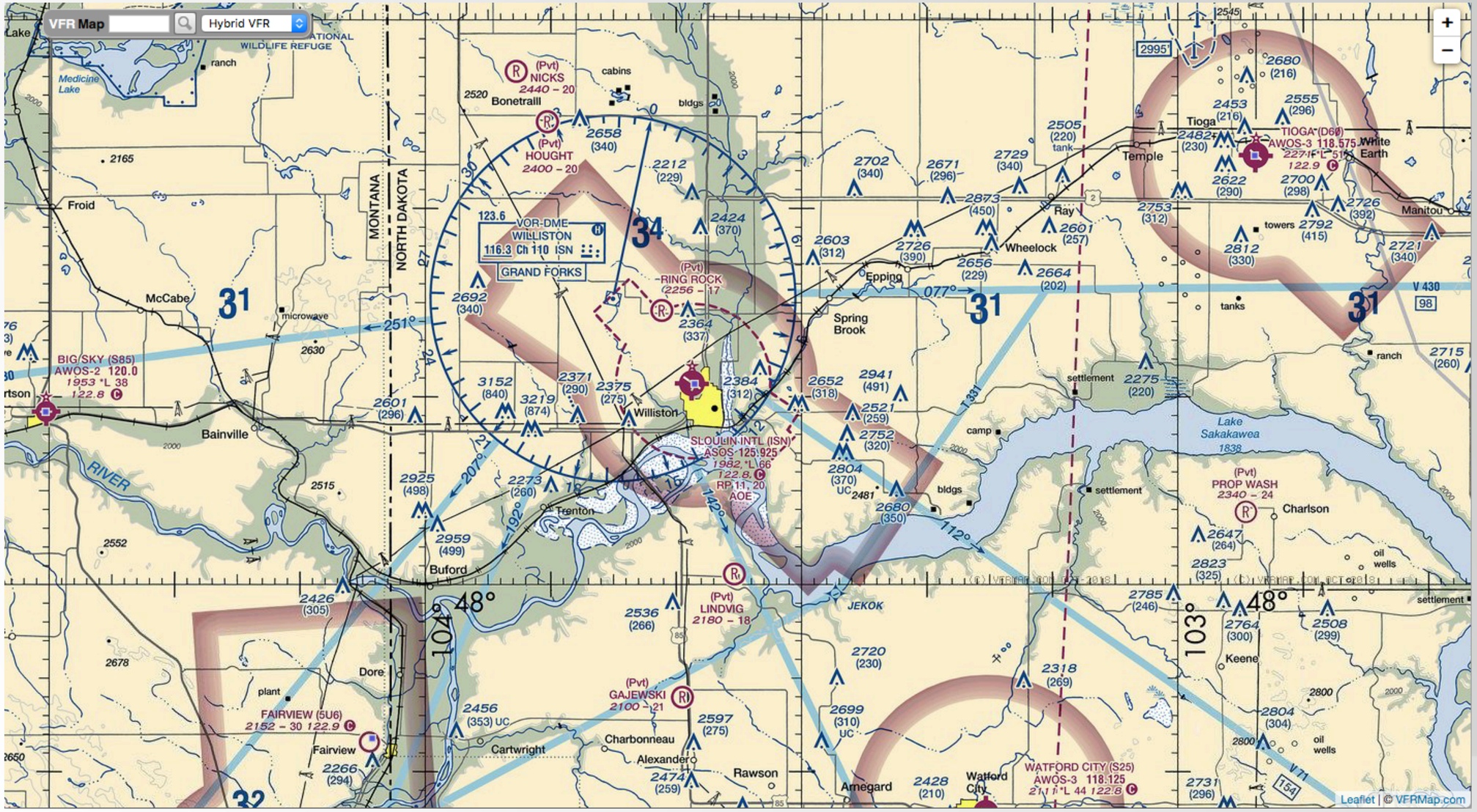
Class E airspace airspace around Airport at Williston, ND starting at the surface (dotted red line), with extensions beginning at 700ft AGL (fuzzy magenta line). Overall surrounding airspace is Class G from the surface to either 1,200ft AGL or up to 14,50ft MSL in really remote areas (these last designation are not shown on Sectional Charts). If not capped by other Class D, C or B Airspace, Class E tops out at 18,000ft MSL where is abuts Class A.



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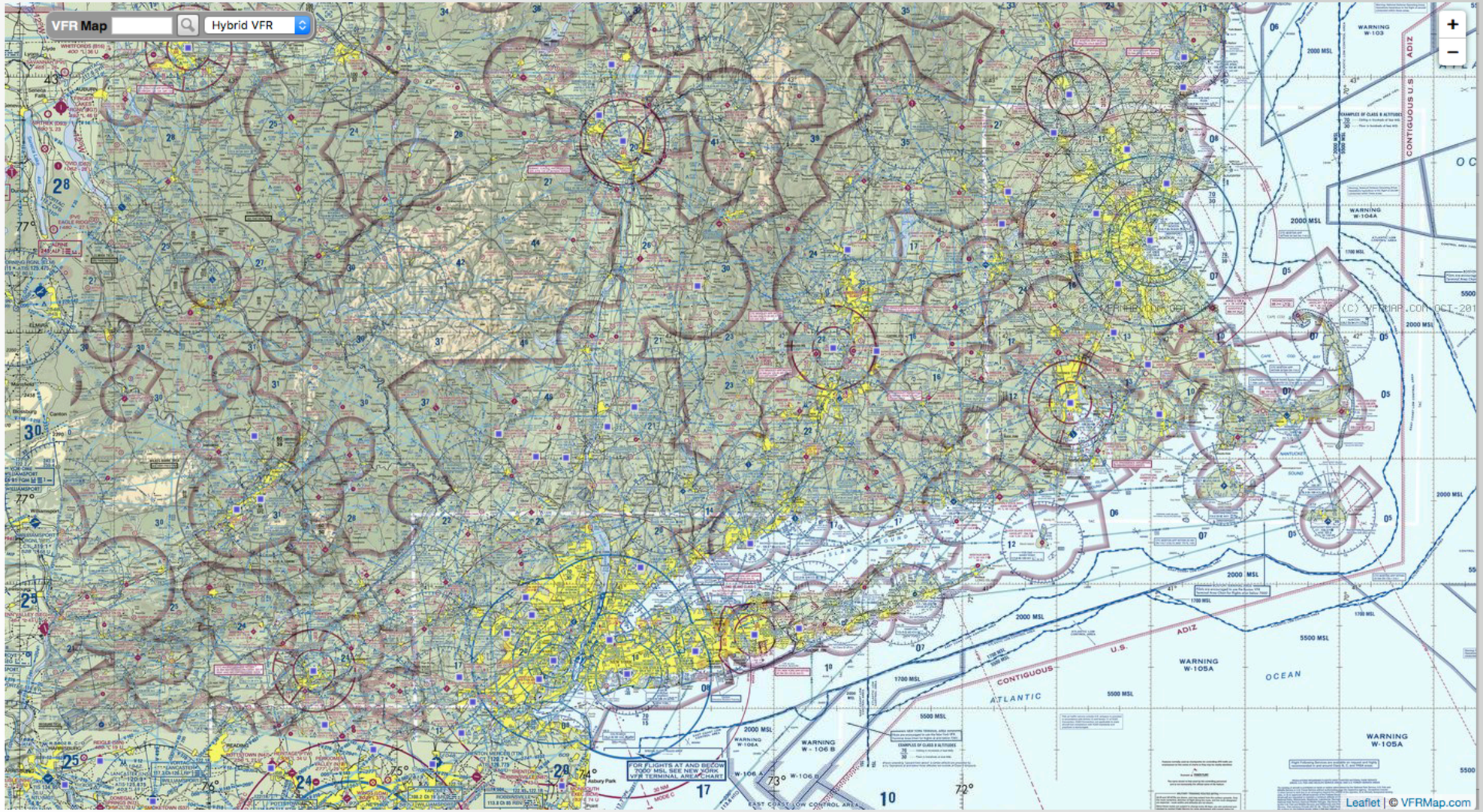
Class E airspace airspace around Airport at Williston, ND starting at the surface (dotted red line), with extensions beginning at 700ft AGL (fuzzy magenta line). Overall surrounding airspace is Class G from the surface to 1,200 ft AGL (this last designation is not shown on Sectional Charts).



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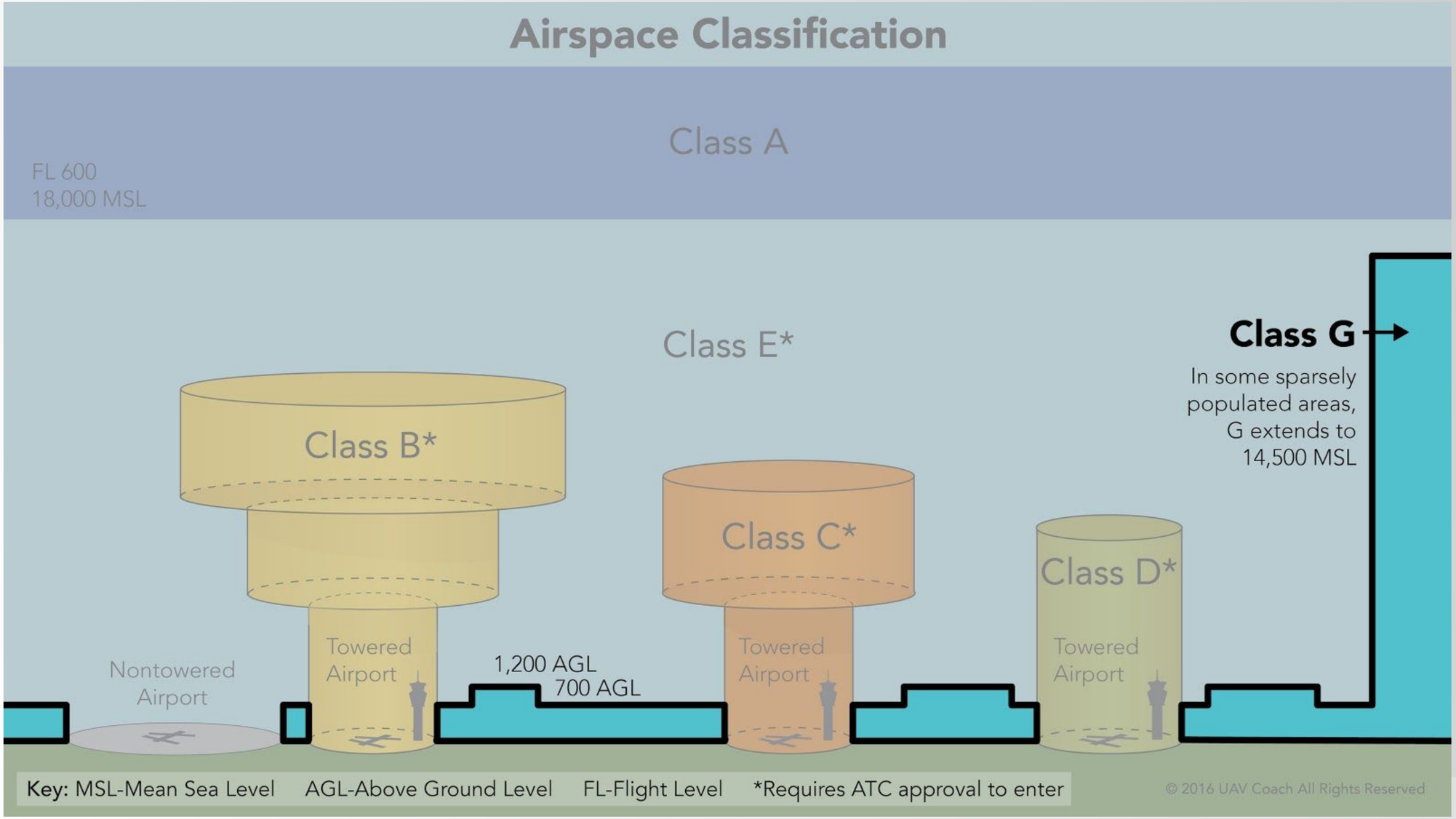
Class G airspace is generally "Uncontrolled". In most cases, unless otherwise temporarily controlled by a NOTAM or TFR, this space is open for sUAS flights without the need to notify FAA, an Airport, etc. Most often Class G Airspace tops out at 700ft or 1,200ft AGL, but in very remote areas it may extend up to 14,500ft MSL. Class G Airspace is not marked on Sectional Charts.



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Class G airspace is generally "Uncontrolled". See the areas outside of the fuzzy magenta lines - up from Long Island Sound eastward past Norwich, around Voluntown and SE down to the Rhode Island shores near Narragansett, Pt Judith and Charlestown.

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A new Airspace configuration is in the works for sUAS operations - FAA and DJI collaboration to establish clearer airspace designations - "directional" airspace limitations around Airports.

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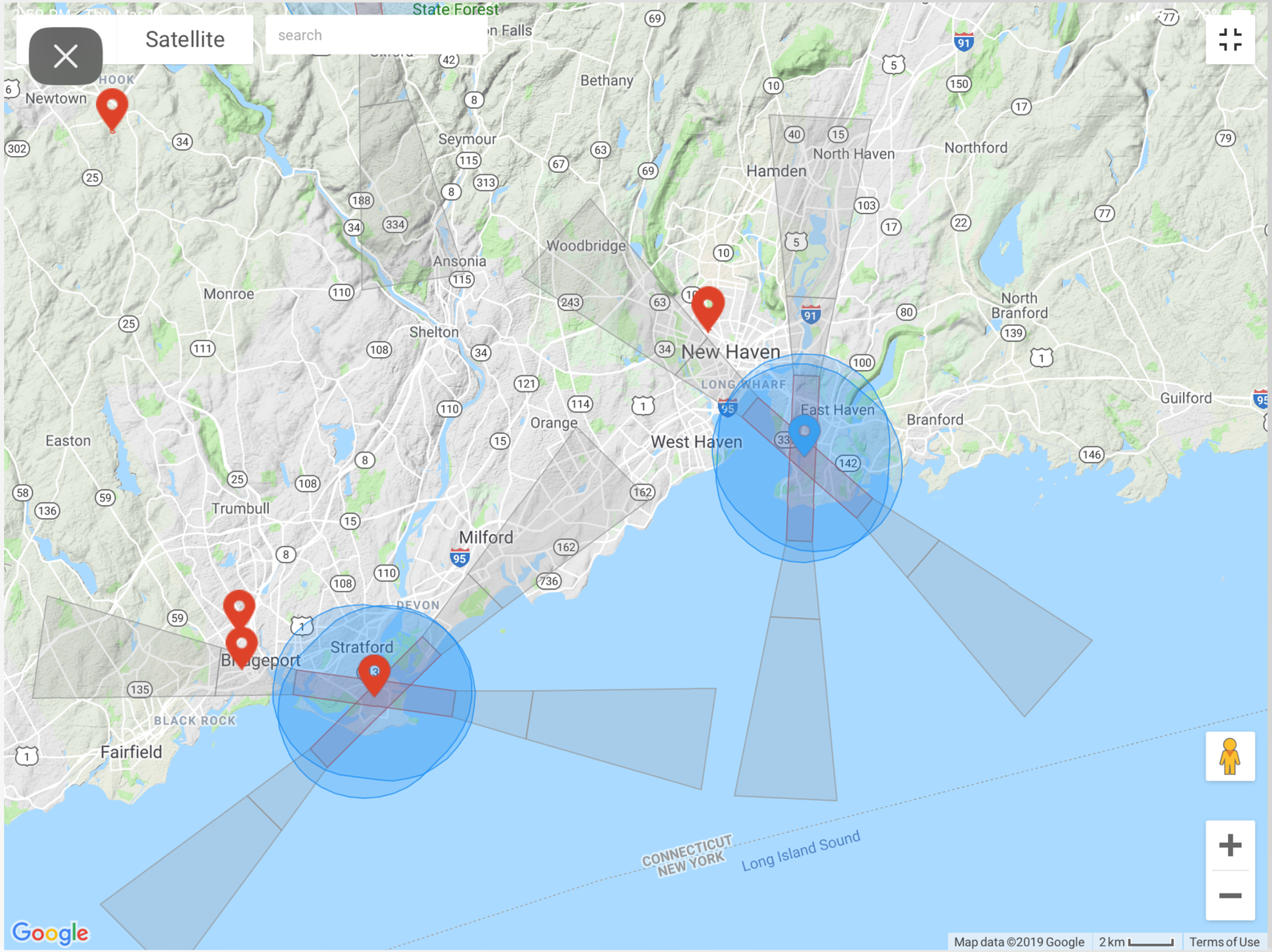
DJI "GeoZones"



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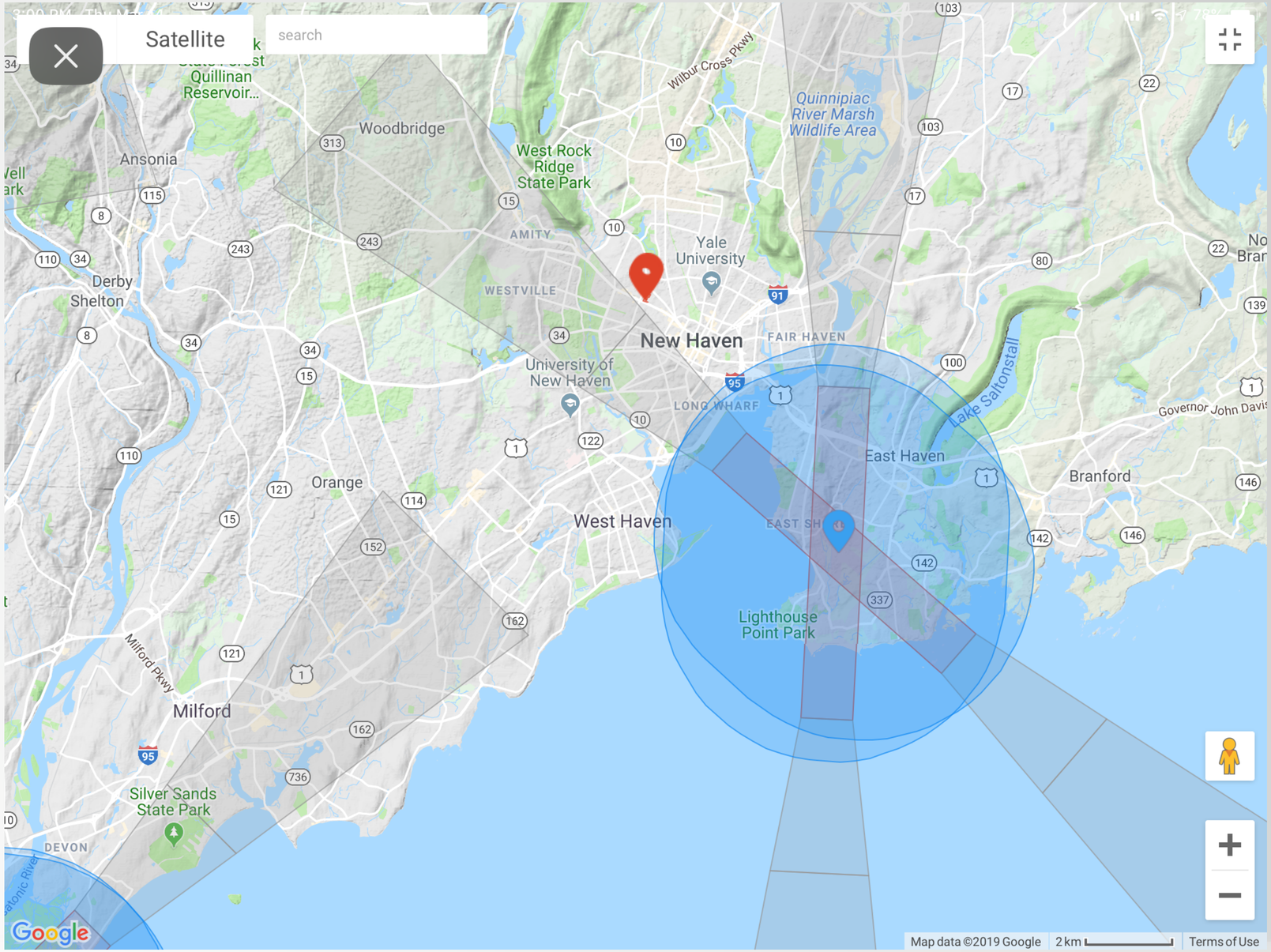

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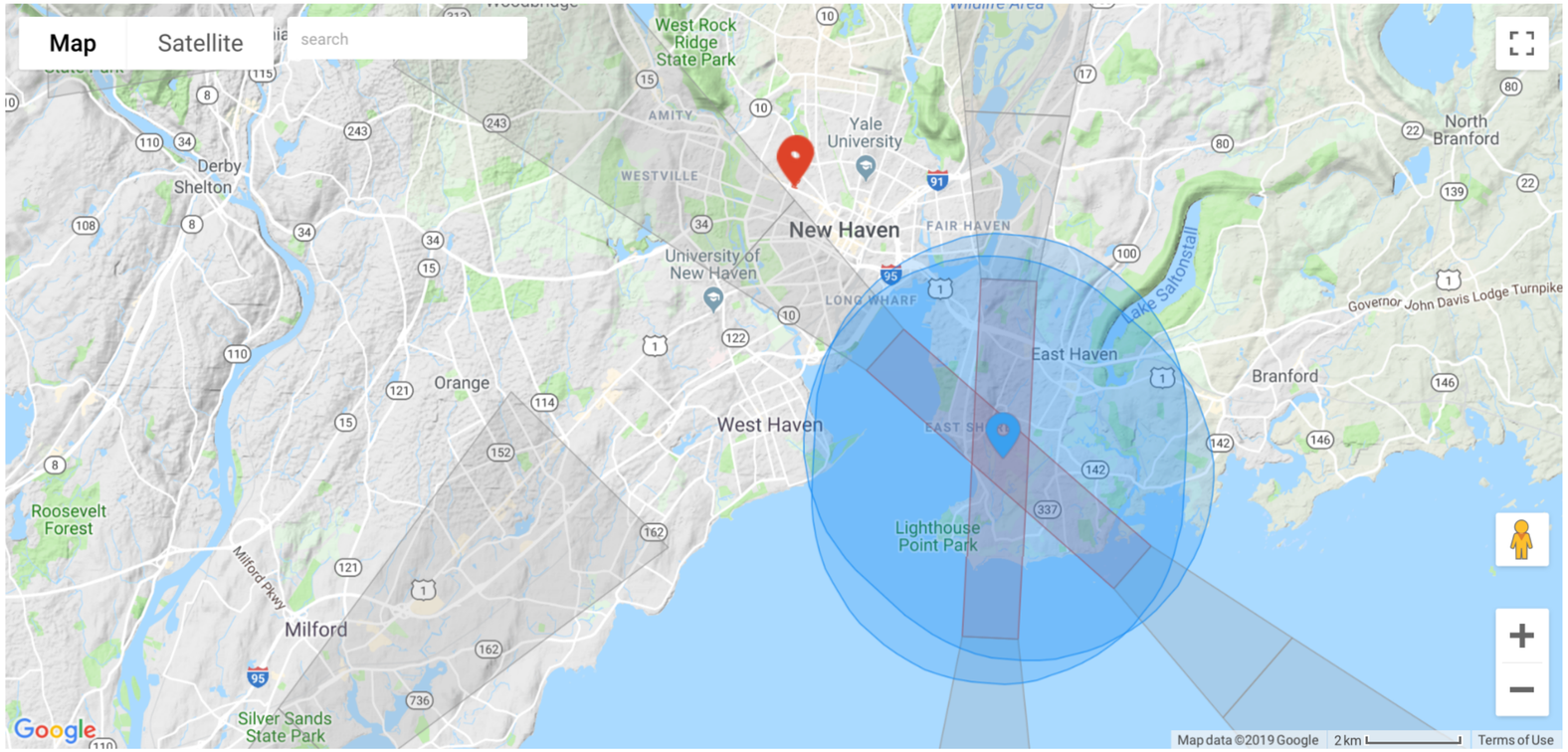
3:19 PM Thu Mar 14 — 73%

dji.com

Select Area | North America | United States | Mavic 2 Enterprise



Tips: In compliance with the relevant laws, policies, and regulations, some GEO Zones will not appear on this web map. Please refer to the DJI GO app for more GEO Zones in effect.

As it consumes too much time for mass data uploading, all safe-fly zones may be hidden when zoomed out.

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Recap Part 107 regulations (flying our sUAS on SCSU Campus)
May 2019 Update…. no Runway 14/32 no longer listed (under long-term repair)

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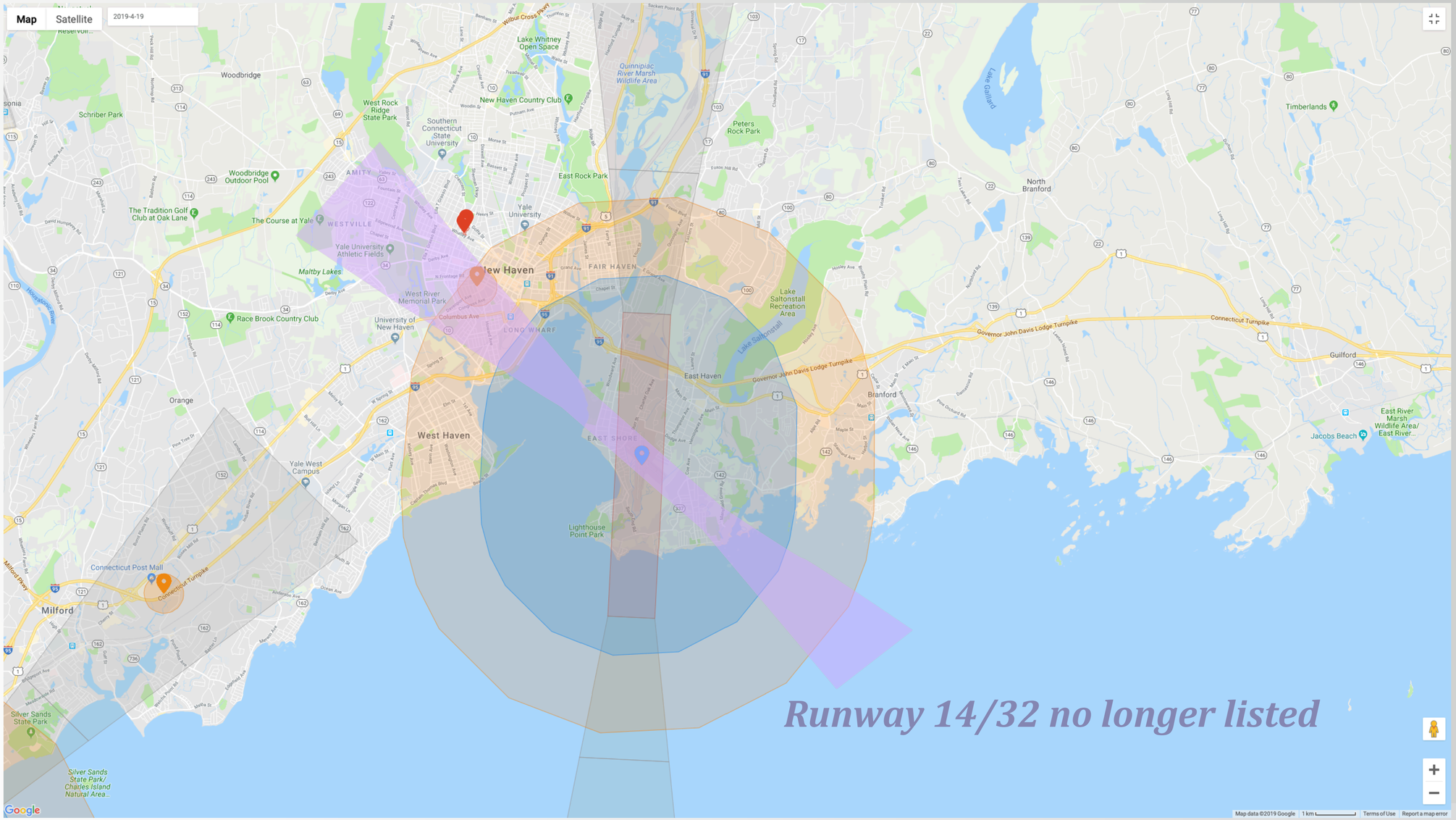

Outline | Schedule
Lab and Field

0800 - 1300

https://www.dji.com/flysafe/geo-map

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DJI "GeoZones"

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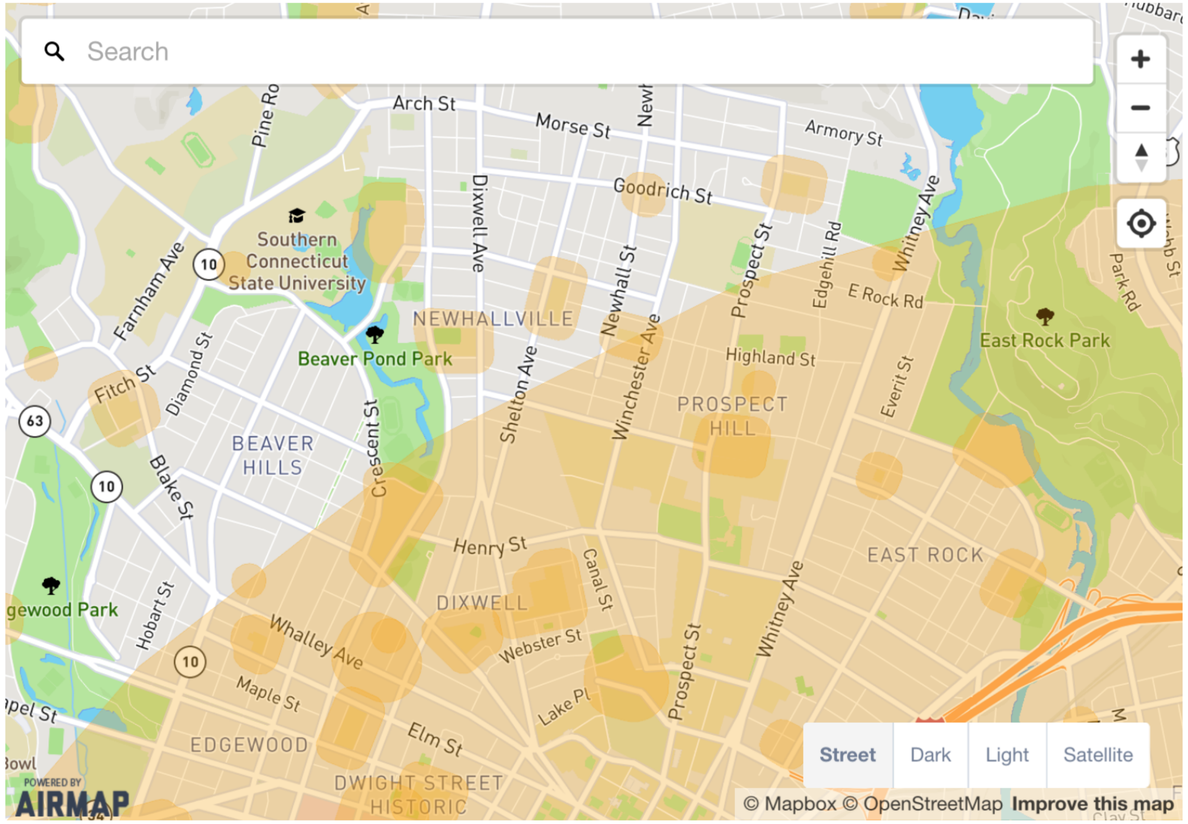
3:08 PM Thu Mar 14 — 76%

knowbeforeyoufly.org

U.S. AIR SPACE MAP

powered by AIRMAP



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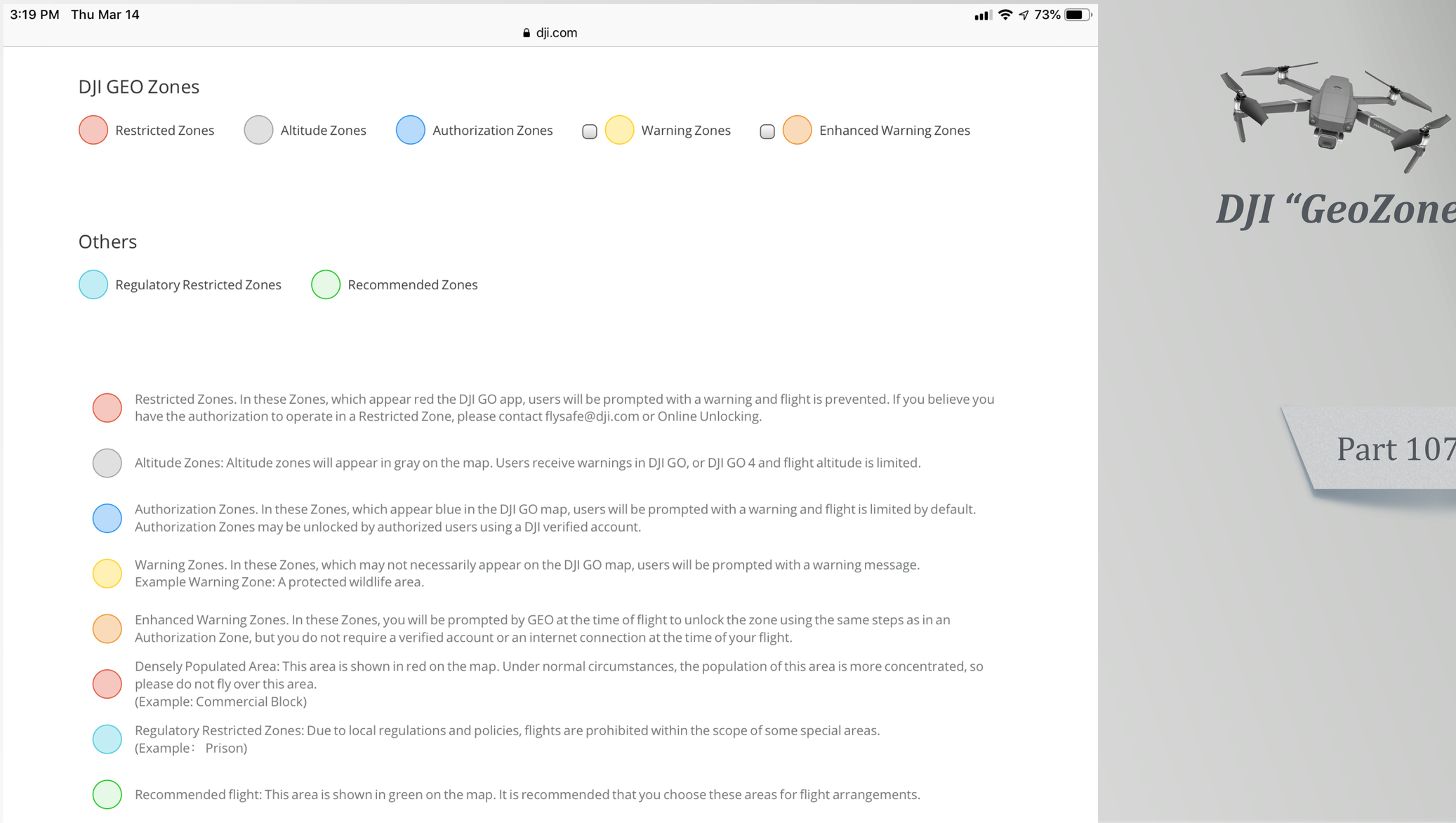
3:19 PM Thu Mar 14
73%
dji.com
DJI GEO Zones
Restricted Zones
Altitude Zones
Authorization Zones
Warning Zones
Enhanced Warning Zones
Others
Regulatory Restricted Zones
Recommended Zones
Restricted Zones. In these Zones, which appear red the DJI GO app, users will be prompted with a warning and flight is prevented. If you believe you have the authorization to operate in a Restricted Zone, please contact flysafe@dji.com or Online Unlocking.
Altitude Zones: Altitude zones will appear in gray on the map. Users receive warnings in DJI GO, or DJI GO 4 and flight altitude is limited.
Authorization Zones. In these Zones, which appear blue in the DJI GO map, users will be prompted with a warning and flight is limited by default. Authorization Zones may be unlocked by authorized users using a DJI verified account.
Warning Zones. In these Zones, which may not necessarily appear on the DJI GO map, users will be prompted with a warning message. Example Warning Zone: A protected wildlife area.
Enhanced Warning Zones. In these Zones, you will be prompted by GEO at the time of flight to unlock the zone using the same steps as in an Authorization Zone, but you do not require a verified account or an internet connection at the time of your flight.
Densely Populated Area: This area is shown in red on the map. Under normal circumstances, the population of this area is more concentrated, so please do not fly over this area.
(Example: Commercial Block)
Regulatory Restricted Zones: Due to local regulations and policies, flights are prohibited within the scope of some special areas.
(Example： Prison)
Recommended flight: This area is shown in green on the map. It is recommended that you choose these areas for flight arrangements.

DJI "GeoZones"

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Special Use Airspace:

- *“Prohibited”*
- *“Restricted”*
- *“Warning Areas”*
- *“Military Operations”*
- *“Special Alert Areas”*

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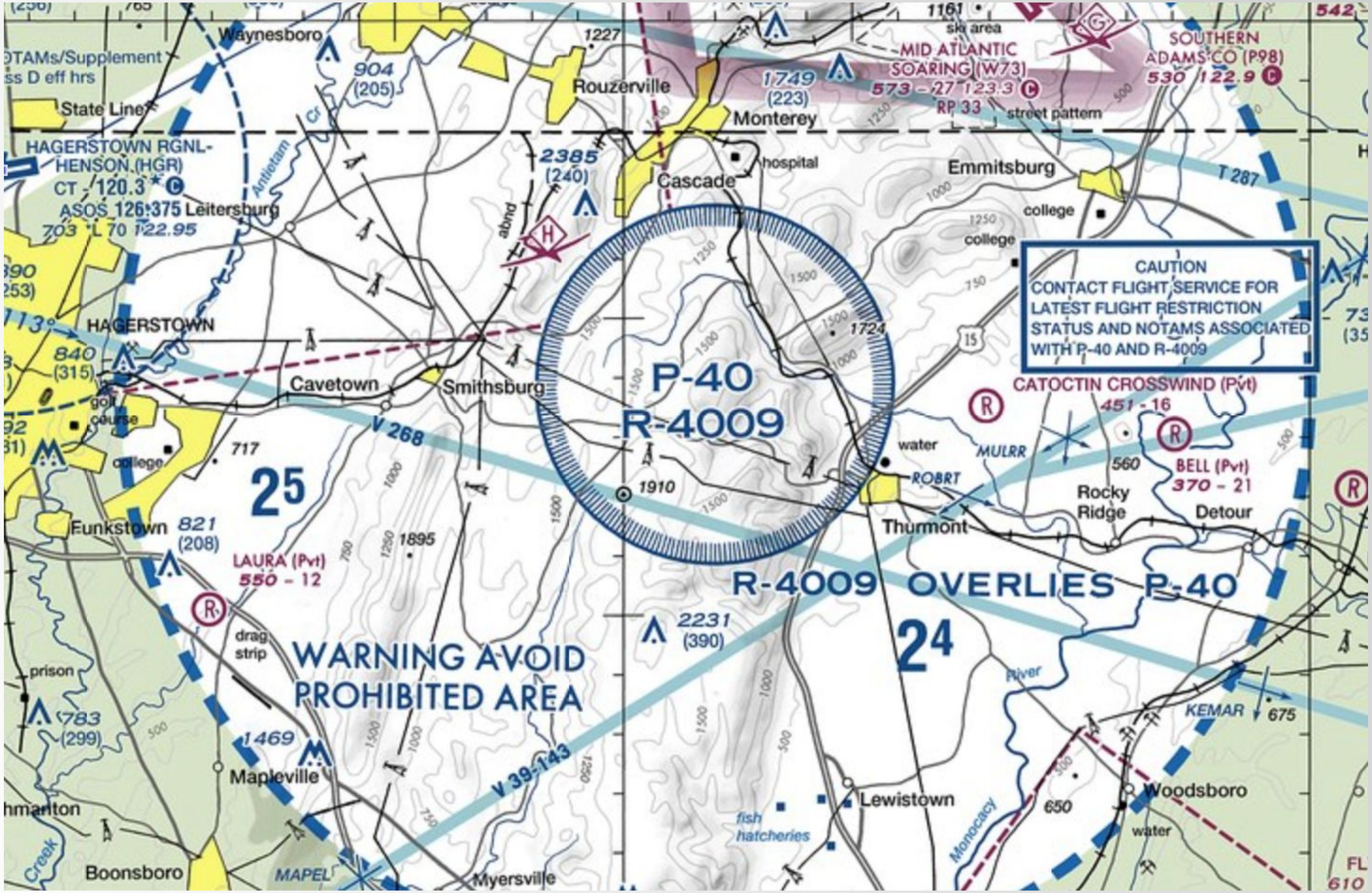
Special Use Airspace: *"Prohibited" e.g. Camp David.*



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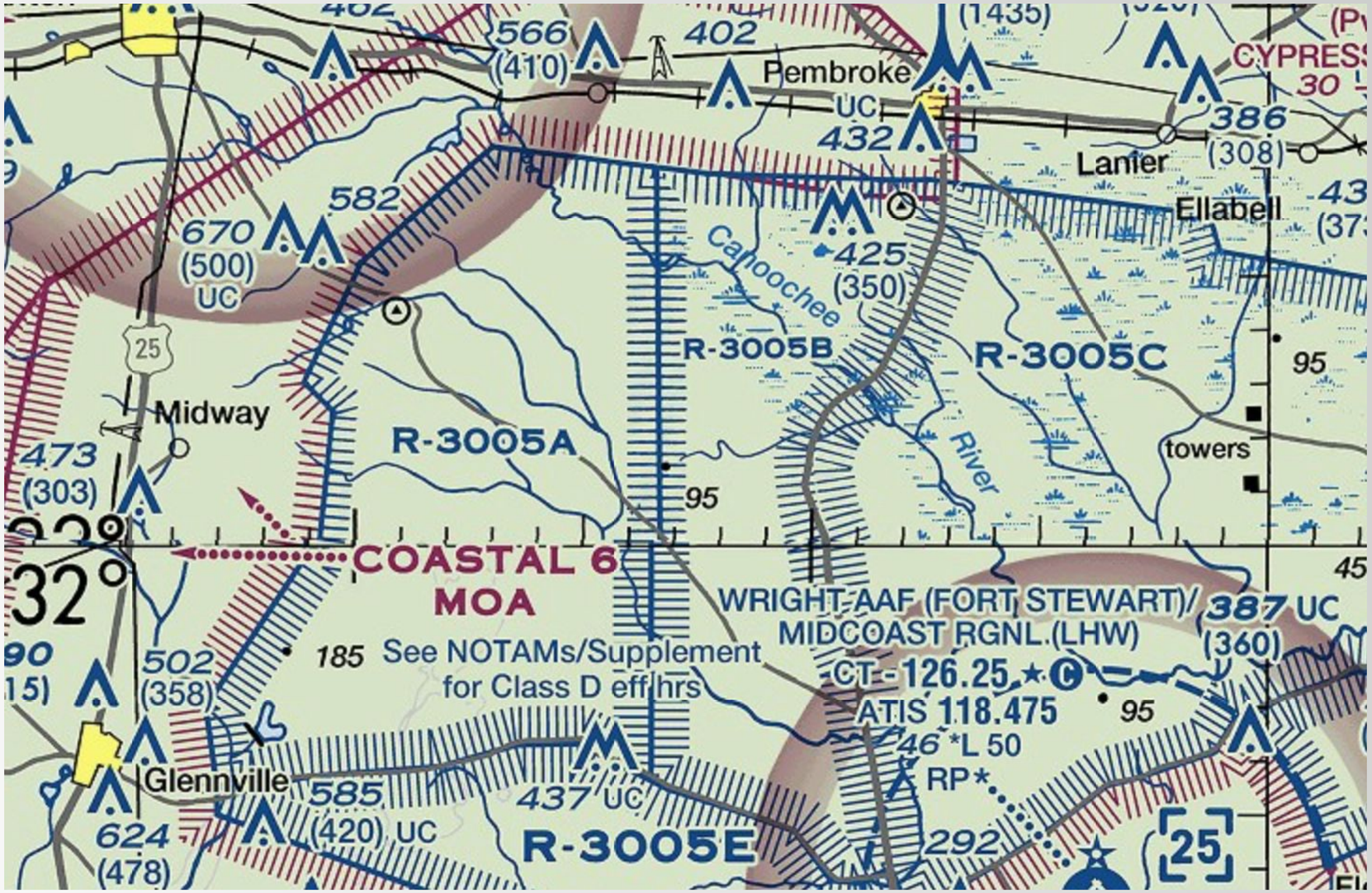
Special Use Airspace: ***"Restricted" labeled "R" followed by a number.***

sUAS operations are a allowed one cleared by local agency in charge.



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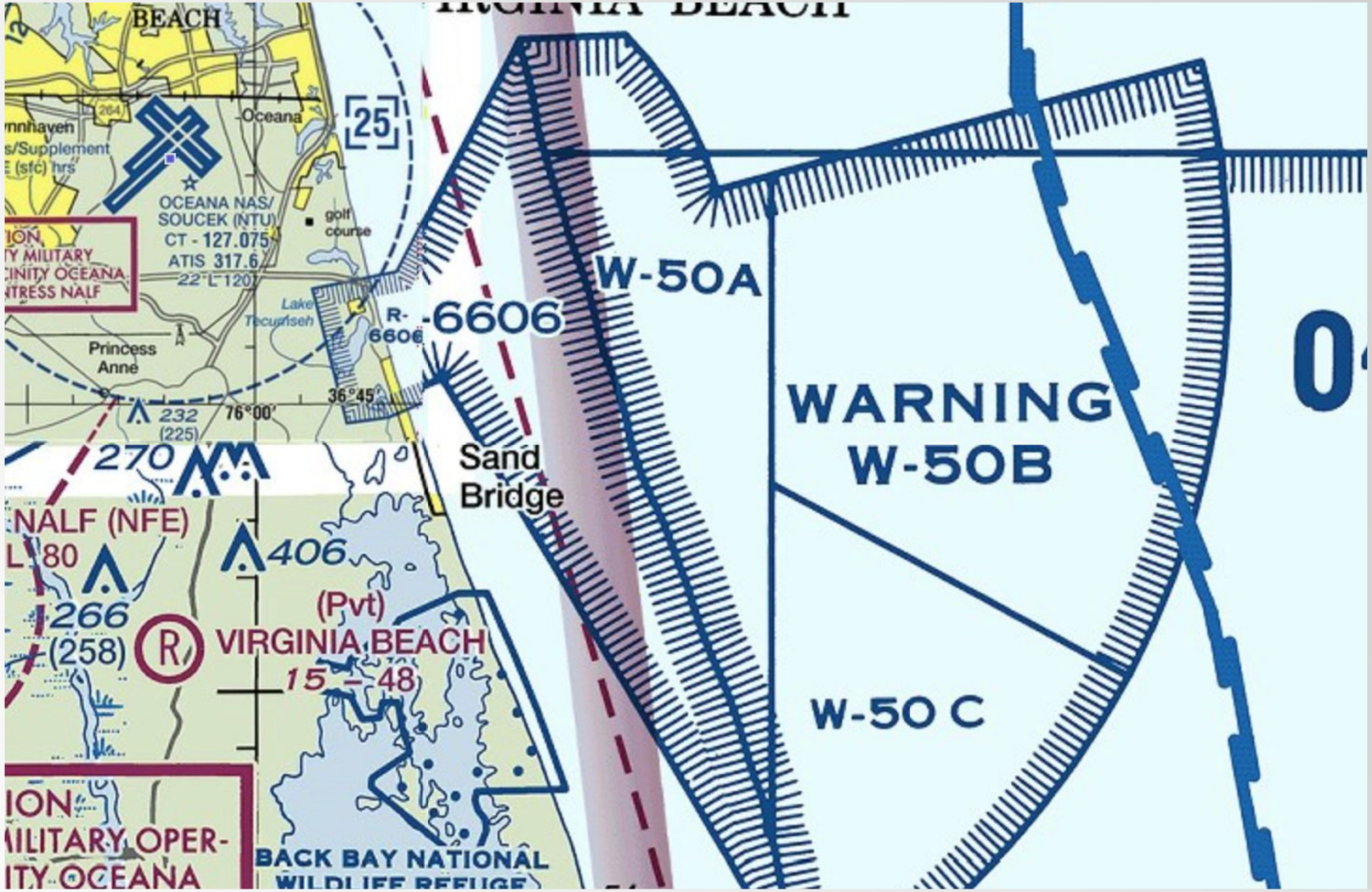
Special Use Airspace: "Warning" labeled "W" followed by a number.

Like Warning Areas, sUAS operations are a allowed, but pilots should be careful as potential dangers may be around.



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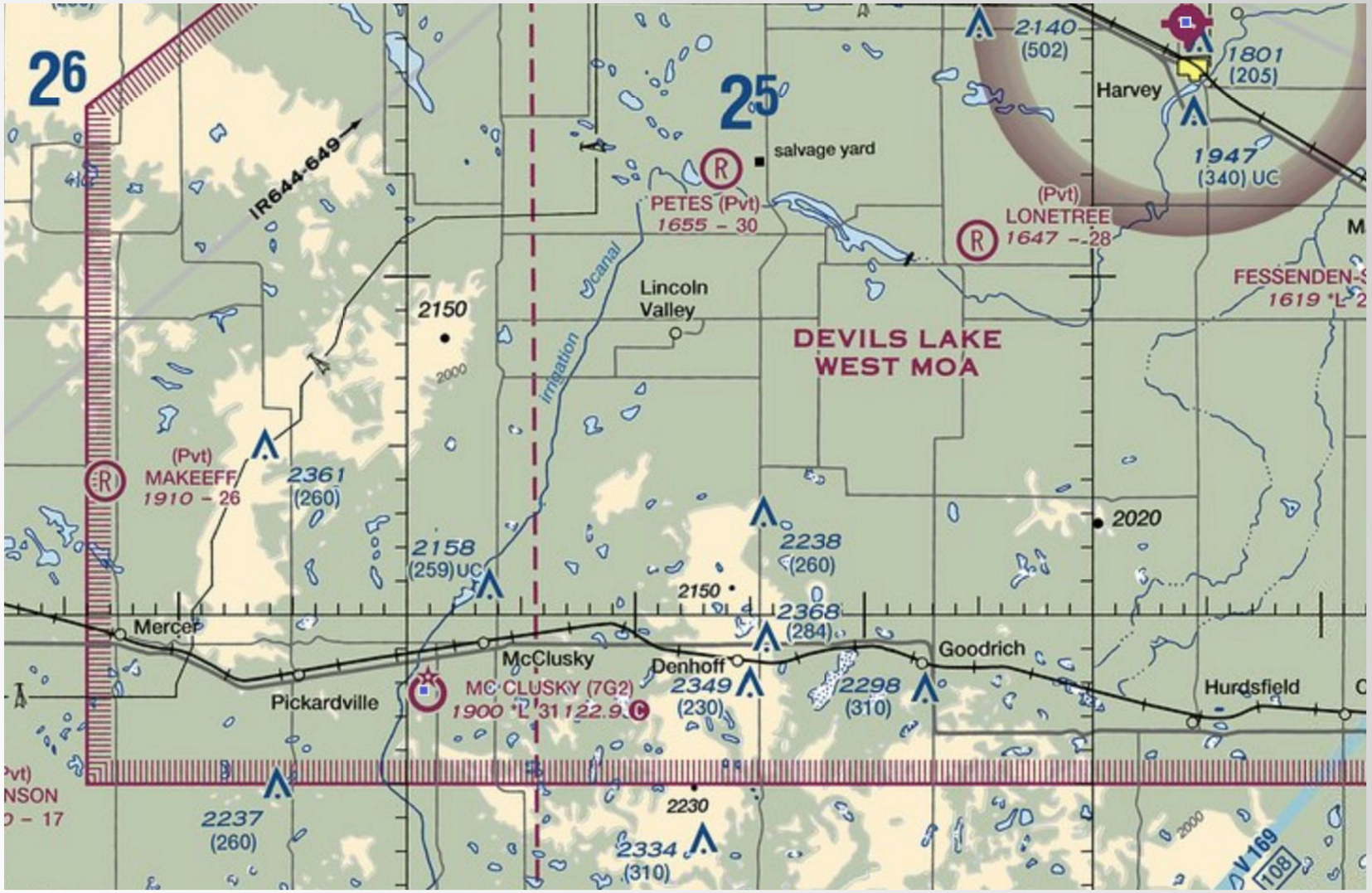
Special Use Airspace: ***"Military Operations Areas (MOAs)"***

e.g. Devils Lake MOA. Usually MOA do not extend down lower than 1,500ft AGL. Usually no permissions are needed to fly sUAS lower that 700ft AGL, but each PIC is responsible for "collision avoidance".



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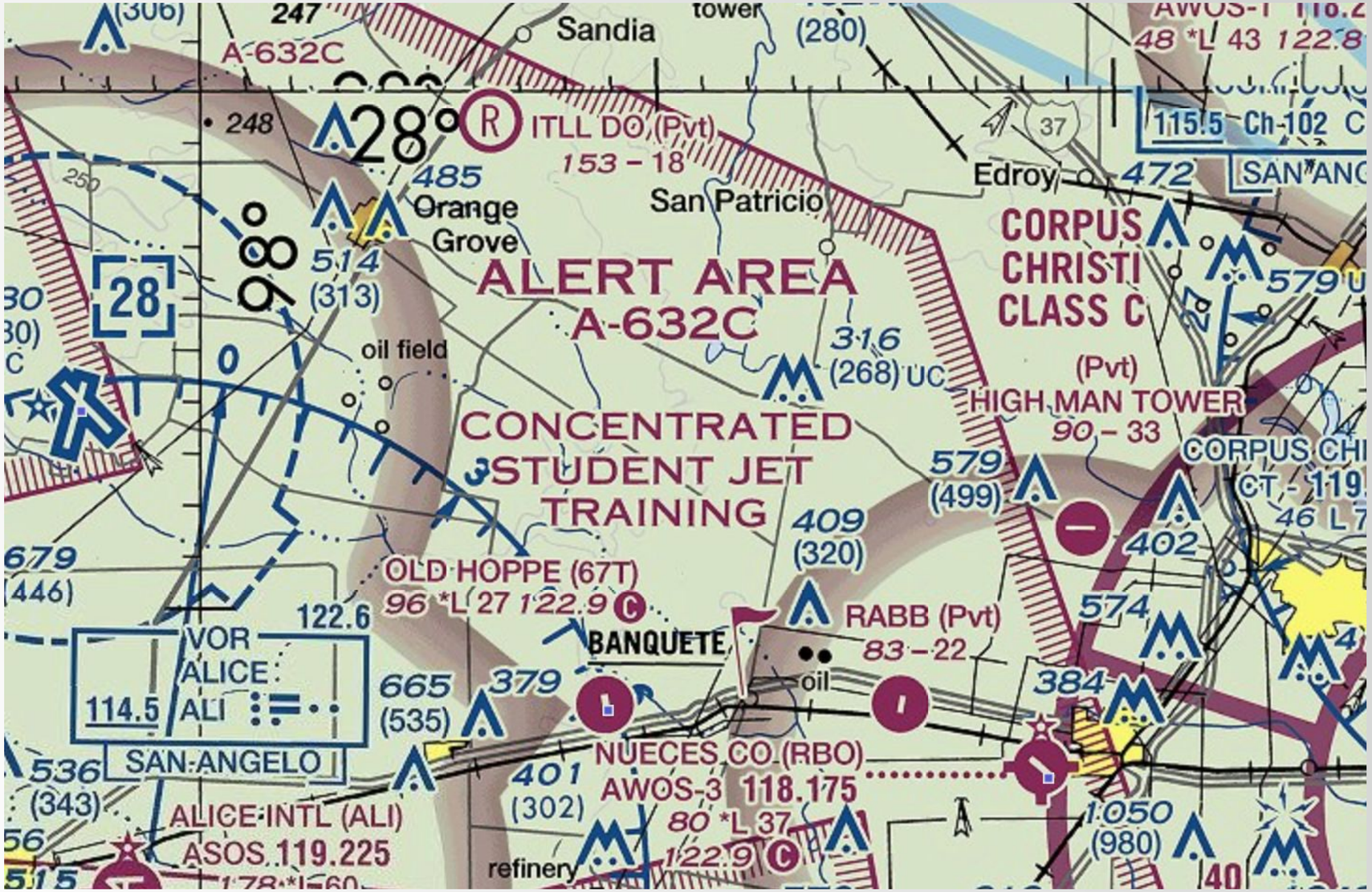
Special Use Airspace: ***"Alert" labeled "A" followed by a number.***

While sUAS flights are allowed, PIC should be aware of possible unusual aerial activity - here designated as "Student Jet Training"..



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Reading the Sectional Chart border "Legend".

This legend identifies all airspace considerations for the Sectional Chart at hand, including any/all Special Use Airspace and their controlling agency contact information, along with noted Utilities, obstructions, etc.

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SECTIONAL AERONAUTICAL CHART

SCALE 1:500,000

LEGEND Airports having Control Towers are shown in Blue, all others in Magenta. Consult Airport/Facility Directory (A/FD) for details involving airport lighting, navigation aids, and services. For additional symbol information refer to the Chart User's Guide.

AIRPORTS

- Other than hard-surfaced runways
- Seaplane Base
- Hard-surfaced runways 1500 ft. to 8069 ft. in length
- Hard-surfaced runways greater than 8069 ft., or same multiple runways less than 8069 ft.
- Open dot within hard-surfaced runway configuration indicates approxmate VOR, VOR-DME, or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private

ADDITIONAL AIRPORT INFORMATION

(R) Private "(Pvt)" – Nos-public use having emergency or landmark valve.

Military – Other than hard-surfaced. All military airports are identified by abbreviations AFB, NAS, AAF, etc. For complets airport information consult DOD FLIP.

(H) Heliport Selected

(U) Unverifield

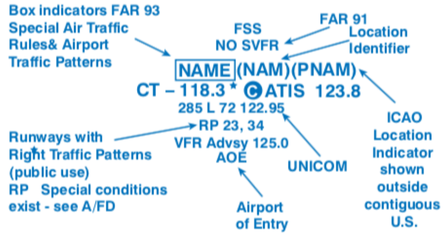
Abandened–paved, having landmark value, 3000 ft. or greater

(F) Ultralight Flight Park Selected

Services–fuel available and field attended during normal working hours depicted by use of ticks around basic airport symbol. (Normal working hours are Mon thru Fri 10:00 A.M. to 4:00 P.M. local tima. Consult A/FD for service availability at airports with hard-surfaced runways greater than 8069 ft.

☆ Rotating airport beacon in operation Sunset to Sunrise

AIRPORT DATA



FSS – Flight Service Station
NO SVFR – Fixed wing special VFR flight is prohibited.
CT– 118.3 – Control Tower (CT) primary frequency
★ – Star indicates operation part-time (see tower frequencies) tabulation for hours of operation).
C – Indicates Common Traffic Advisory Frequencies (CTAF)
ATIS 123.8 – Automatic Terminal Information Service
ASOS/AWOS 135.42 – Automated Surface Weather Observing Systems (shown where full-time ATIS is not available). Some ASOS/AWOS facilities may not be located at airports.
UNICOM – Aeronoutical advisory station
VFR Advsy – VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 – Elevation in feet
L – Lighting in operation sunset to sunrise
★L – Lighting limitations exist, refer to Airport/Facility Directory.
72 – Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective charactor is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

AIRPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION

Only the controlled and reserved airspace effective below 18,000 ft. MSL are shown on this chart. All times are local.

- Class B Airspace
- Class C Airspace (mode C See FAR 91.215/AIM.)
- Class D Airspace
- 40 Ceiling of Class D Airspace in hundreds of feet. (A minus ceiling value indicates surface up to but not including that value).
- Class E (sfc) Airspace
- Class E Airspace with floor 700 ft. above surface.
- Class E Airspace with floor 1200 ft. or greater above surface that abuts Class G Airspace.

2400 MSL / 4500 MSL Differentiates floors of Class E Airspace greater than 700 ft. above surface.

Class E Airspace exists at 1200' AGL unless otherwise designated as shown above.
Class E Airspace low altitude Federal Airways are indicated by center line.
Intersection - Arrows are directed towards facilities which establish intersection.

132° → V 69 ← 169

Total mileage between NAVAID, on direct Airways
Class E Airspace low altitude RNAV routes are indicated by center line.

T319 TK313 (helicopter only) RNAV waypoint

- Prohibited, Restricted, and Warning Areas; Canadian Advisory, Danger, and Restricted Areas.
- Alert Area and MOA - Military Operations Area
- Special Airport Traffic Area (See FAR Part 93 for details)
- ADIZ - Air Defense Identification Zone
- Mode C (See FAR 91.215/AIM).
- National Security Area
- Terminal Radar Service Area (TRSA)
- IR211 MTR - Military Training Route

MISCELLANEOUS

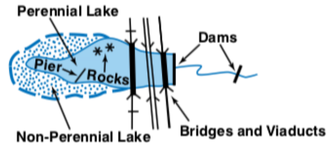
−1° E − Isogonic Line (2010 VALUE)

- (U) Ultralight Activity
- (H) Hang Glider Activity
- (G) Glider Operations
- (UA) Unmanned Aircraft Activity
- Parachute Jumping Area (See Airport/Facility Directory).
- Marine Light
- NAME (VPXYZ)
- VFR Waypoints (See Airport/Facility Directory for latitude/longitude).

TOPOGRAPHIC INFORMATION

- 95 / 40 Roads & Road Markers
- Railroad
- Power Transmission Lines
- Aerial Cable
- Landmark Feature - stadium, factory, school, golf course, etc.
- Outdoor Theatre
- Lookout Tower 618 (Elevation Base of Tower)
- CG Coast Guard Station
- Race Track
- Tank-water, oil or gas
- Oil Well • Water Well
- Mine or Quarry
- Mountain Pass 11823 (Elevation of Pass)

(Pass symbol does not indicate a recommended route or direction of flight and pass elevation does not indicate a recommended clearance altitude. Hazardous flight conditions may exist within and near mountain passes).



RADIO AIDS TO NAVIGATION

- VHF OMNI RANGE (VOR)
- VORTAC
- VOR-DME
- Non-Directional Radiobeacon (NDB)
- NDB-DME
- Other facilities. i.e., FSS Outlet, RCO, etc.

COMMUNICATION BOXES

Underline indicates no voice on this frequency. Crosshatch indicates Shutdown Status
★ Operates less than continuous or On-Request.
A ASOS/AWOS
H HIWAS

FSS radio providing voice communication

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2, 243.0 and 255.4 (Canada - 121.5, 126.7 and 243.0) are available at many FSSs and are not shown above boxes. All other frequenciesare shown.

Certain FSSs provide Airport Advisory Service, see A/FD.

R - Receive Only.

Frequencies above this line box are remoted to NAVAID site. Other FSS frequencies providing voice communication may be available as determined by altitude and terrain. Consult Airport/Facility Directory for complete information.

OBSTRUCTIONS

- 1000 ft. and higher AGL
- below 1000 ft. AGL
- or Group Obstruction
- Obstruction with high-intensity lights May operate part-time
- or
- Elevation of the top above mean sea level
- 2049 / (1149) Height above ground
- UC Under construction or reported; position and elevation unverified.

NOTICE: Guy wires may extend outward from structures.

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Open full FAA NAS for New York and zoom in on Sectional Chart border, etc…

FAA_NAS_New_York_98_P.jpg

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